

AYURVEDIC MANAGEMENT OF MADHUMEHA (TYPE 2 DIABETES MELLITUS) WITH COMPOUND HERBAL FORMULATIONS AND TIKTA-KSHIRA BASTI: A CASE REPORT

Dr. Deven Lodha¹, Dr. Urmila Shirke^{2*}, Dr. Vaishali Lodha³

¹Postgraduate Scholar, Department of Swasthavritta Evam Yoga, Dr. D.Y. Patil College of Ayurved and Research Centre, Dr. D. Y. Patil Vidyapeeth (Deemed to be University), Pune, Maharashtra, India.

²HOD and Professor, Department of Swasthavritta Evam Yoga, Dr. D.Y. Patil College of Ayurved and Research Centre, Dr. D. Y. Patil Vidyapeeth (Deemed to be University), Pune, Maharashtra, India.

³Private Practitioner, Om Namu Chikitsalay, Pune, Maharashtra, India.

Article Received on 05 June 2026,
Article Revised on 25 June 2026,
Article Published on 01 July 2026

<https://doi.org/10.5281/zenodo.21068549>

*Corresponding Author

Dr. Urmila Shirke

HOD and Professor, Department of Swasthavritta Evam Yoga, Dr. D.Y. Patil College of Ayurved and Research Centre, Dr. D. Y. Patil Vidyapeeth (Deemed to be University), Pune, Maharashtra, India.



How to cite this Article: Dr. Deven Lodha¹, Dr. Urmila Shirke^{2*}, Dr. Vaishali Lodha³ (2026). Ayurvedic Management Of Madhumeha (Type 2 Diabetes Mellitus) With Compound Herbal Formulations And Tikta-Kshira Basti: A Case Report World Journal of Pharmaceutical Research, 15(12), 1427-1436.

This work is licensed under Creative Commons Attribution 4.0 International license.

ABSTRACT

Type 2 Diabetes Mellitus (T2DM) continues to rise in prevalence globally, and in Ayurveda this condition correlates with Madhumeha, a subtype of Prameha marked by sweet, turbid urine and broader metabolic dysregulation. Classical Ayurvedic literature describes a comprehensive management approach involving both Shodhana and Shamana therapies. We report the case of a 55-year-old women presented with an eight-week history of polyuria, polydipsia, polyphagia, burning sensation in the extremities, generalized body ache, and a persistent sweet taste in the mouth. Investigations revealed a fasting blood glucose of 176.3 mg/dL and a post-prandial level of 277.9 mg/dL, HbA1c of 7.62% leading to a diagnosis of newly detected, unmedicated Madhumeha/T2DM. The patient was managed for eight months using a structured, multimodal Ayurvedic regimen comprising Nisha Amlaki Churna, Chandraprabha Vati, Phalatrikadi Kashaya, Tikta Kshira Basti and Shadangapaniya siddha water, without any conventional

hypoglycaemic agents. By the end of treatment fasting blood glucose had reduced by 41.8%, post-prandial glucose by 41.5% and HbA1c by 26.51%. All presenting symptoms resolved, and no adverse events were observed throughout the treatment period. This case demonstrates that a multimodal classical Ayurvedic regimen, integrating purificatory and palliative therapies with dietary and digestive correction, can achieve substantial glycaemic improvement and symptomatic relief in T2DM without pharmacological intervention. The findings support the rationale for Ayurvedic management in early, unmedicated T2DM and underscore the need for prospective, controlled studies to establish efficacy, standardize protocols, and validate these outcomes across larger populations.

KEYWORDS: Madhumeha; Prameha; Type 2 Diabetes Mellitus; Tikta Kshira Basti; Chandraprabha Vati; Case Report.

1. INTRODUCTION

Type 2 Diabetes Mellitus (T2DM) is a chronic, progressive metabolic disorder characterised by hyperglycaemia resulting from insulin resistance and relative insulin deficiency. According to the International Diabetes Federation approximately 537 million adults worldwide were living with diabetes, a figure projected to reach 643 million by 2030.^[1] India alone accounted for 74 million cases in 2021, placing it second globally. Type 2 Diabetes Mellitus accounts for over 90% of all diabetes cases and is closely linked with obesity, sedentary lifestyle, and dietary patterns.^[2] In Ayurveda, this condition correlates with Madhumeha a subtype of Prameha characterised by Vata-predominance secondary to Kapha-Meda aggravation. Charaka Samhita describes Prameha as 'Prabhoot avil mutrata,' denoting increased turbid urination. Madhumeha is considered as a manageable condition requiring sustained Shodhana and Shamana therapies combined with strict dietary regulation.^[3,4,5]

Several Ayurvedic herbs have demonstrated hypoglycaemic activity in preclinical and clinical studies through mechanisms including alpha-glucosidase inhibition, insulin sensitisation, and preservation of pancreatic beta-cell function. This case report documents the clinical outcomes of a structured Ayurvedic regimen in a case of newly detected Type 2 Diabetes Mellitus over an eight-month period.^[6]

2. CASE PRESENTATION

2.1 Patient Information

A 55-year-old married housewife, presented with the following complaints: Sarvangavedana (generalised body ache), Madhuryamasyata (sweet taste in the mouth), Karapadadaha (burning sensation at palms and soles), Pipasadhikya (excessive thirst/polydipsia), Mootradhikya (frequent urination/polyuria 8-9 times per day) for 2-3 months; and Kshudha Vriddhi (excessive appetite/polyphagia), Atichinta (excessive mental stress), and Nidravridhi (excessive daytime sleepiness) for the preceding one month. She was of Vata-Kapha Prakriti, Krura Koshtha, Mandagni and Madhyama Satva. Her diet consisted of lacto-vegetarian food with a high proportion of oily, fried, and junk food items, and she habitually ate late at night. A positive family history of diabetes (maternal) was elicited. She had no prior medical diagnoses, was not on any allopathic medications, and reported no known drug allergies or addictions.

2.2 Clinical Examination

General examination revealed a medium-built female with a dry coated tongue (Saama Jihva), indicating Ama formation. Systemic examination of the respiratory, gastrointestinal, cardiovascular, central nervous, and locomotor systems yielded no abnormality. Pulse rate 84/min, respiratory rate 18/min, blood pressure 120/80mmhg.

2.3 Ashtavidha Parikshana

Ashtavidha Pariksha revealed Vata-Kapha predominant pulse, irregular and constipated stool with significant retention, frequent excessive urine, moderately warm touch, whitish eye discoloration and heavily coated tongue. Speech and build were normal.

Vikruta Strotas Parikshana revealed involvement of Rasavaha Strotas (Atichinta, Madhuryamasyata), Medovaha Strotas (Swedadhikya, Nidradhikya), Majjavaha Strotas (Atinidra, Hasta-Pada Daha), and Mutravaha Strotas (Bahumutrata) consistent with Madhumeha pathogenesis.

2.4 Investigations

Baseline blood glucose investigations revealed a Fasting Blood Sugar (FBS) of 176.3 mg/dL, Post-Prandial Blood Sugar (PPBS) of 277.9 mg/dL and HbA1c of 7.62% satisfying the American Diabetes Association (ADA) diagnostic criteria for Type 2 Diabetes Mellitus (FBS

≥ 126 mg/dL; PPBS ≥ 200 mg/dL and HbA1c $\geq 6.5\%$).^[7] No concurrent allopathic hypoglycaemic agents were prescribed throughout the observation period.

3. Therapeutic Intervention

Treatment was designed according to classical Ayurvedic principles targeting Kapha-Meda Dushti, Srotoshodhana, Deepana-Pachana, and Mutravaha Strotas regulation, the management was carried out over 8 months across 8 follow-up visits. The treatment plan combined Shamana (palliative oral drugs) with Samshodhana (Panchakarma — Tikta Kshira Basti) and Pathyapathya (dietary and lifestyle advice). Shadanganiya siddha water was prescribed throughout as medicated drinking water.

Table No. 1: Follow-up and treatment protocol.

Follow-up	Drug / Therapy	Dose / Anupana	Duration	Notes
Baseline Day 1 (June-24)	Chitrakadi Vati Gandharva Haritaki Vati Nisha Amlaki Churna Chandraprabha Vati	1tab BD / warm water 2 tabs HS 2 g BD / warm water 1 tab BD / warm water	1 month each	Shadanganiya siddha water advised throughout
Follow-up 2 (July-24)	All baseline medicines continued Phalatrikadi Kashaya added	As above 10 mL with ½ cup warm water	1 month	
Follow-up 3 (Aug-24)	All oral medicines stopped Tikta Kshira Basti (alternate days)	100 mL per sitting	7 Basti sessions	Panchakarma intervention
Follow-up 4 (Sept-24)	Nisha Amlaki Churna Chandraprabha Vati Phalatrikadi Kashaya Arogyavardhini Vati	2 g BD / warm water 1 tab BD / warm water 10 mL / warm water 1 tab BD / warm water	1 month each	Arogyavardhini Vati stopped after 15 days in next follow-up
Follow-up 5 (Oct-24)	Continue September regimen (Arogyavardhini Vati stopped at 15 days)	As above	1 month	
Follow-up 6 (Nov-24)	Nisha Amlaki Churna Chandraprabha Vati Phalatrikadi Kashaya Panchtikta Guggulu	2 g BD / warm water 1 tab BD / warm water 10 mL / warm water 2 tabs BD / warm water	1 month each	
Follow-up 7 (Dec-24)	Continue November regimen Chitrakadi Vati added Rasa Pachaka added	As above 1 tab BD / warm water 1 tab BD / warm water	1 month	
Follow-up 8 (Jan-25)	Continue December regimen	As above	1 month	Final follow-up

Dietary advice: Reduction of oily, fatty, and junk foods; avoidance of late-night eating; inclusion of bitter and astringent vegetables (karela, methi, drumstick); adequate hydration with Shadangapaniya water; regular light exercise.

4. Follow-Up and Outcomes

4.1 Glycaemic Outcomes

Serial blood glucose monitoring at each follow-up demonstrated progressive reduction in both fasting, post-prandial blood sugar levels and HbA1c percentage.

Table No. 2: Monthly BSL charting.

Month	BSL Fasting (mg/dL)	BSL Post-Prandial (mg/dL)	Change in Fasting (mg/dL)	Change in PP (mg/dL)
June 2024 (Baseline)	176.3	277.9	—	—
July 2024	150.8	252.0	-25.5	-25.9
August 2024	130.9	234.4	-45.4	-43.5
September 2024	131.7	182.0	-44.6	-95.9
October 2024	130.5	178.7	-45.8	-99.2
November 2024	146.9	175.8	-29.4	-102.1
December 2024	112.3	175.8	-64.0	-102.1
January 2025	102.5	162.6	-73.8	-115.3

By the end of Month 8 (January 2025), fasting BSL decreased from 176.3 mg/dL to 102.5 mg/dL (absolute reduction: 73.8 mg/dL; percentage reduction: 41.8%) and PP BSL decreased from 277.9 mg/dL to 162.6 mg/dL (absolute reduction: 115.3 mg/dL; percentage reduction: 41.5%). The most rapid decline in PP BSL occurred between August and September 2024, coinciding with the Tikta Kshira Basti intervention.

Table No. 3: HbA1c charting.

Month	HbA1c	Change in HbA1c
March 2024	7.62%	—
January 2025	5.6%	-26.5%

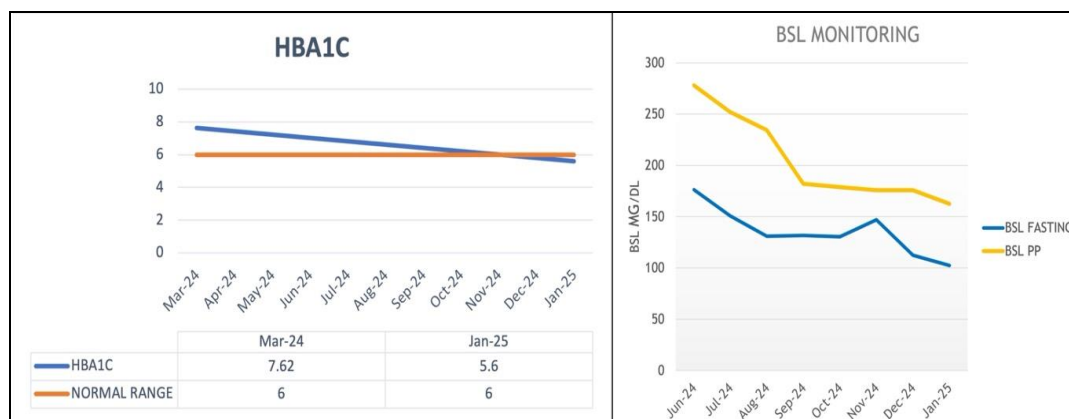


Fig. No. 1: HbA1c and BSL chart graphical representation.

4.2 Symptomatic Outcomes

Progressive symptomatic improvement was documented at each follow-up:

- Polyuria: Frequency reduced from 8–9 times/day to near-normal (3–5 times/day) by Month 4.
- Polydipsia: Thirst normalised by Month 3.
- Burning sensation (Karapadadaha): Significant relief noted from Month 2.
- Body ache and sweet taste in mouth: Resolved by Month 3.
- Hypersomnia and excessive mental stress: Improved steadily from Month 2 onwards.
- Constipation: Bowel regularity improved from Month 1 with Gandharva Haritaki and Chitrakadi Vati.

The patient did not report any adverse drug reactions, gastric intolerance, or unexpected clinical deterioration at any follow-up visit.

5. DISCUSSION

This case demonstrates clinically significant glycaemic control in a newly diagnosed T2DM patient over 8 months using a structured ayurvedic protocol without any conventional pharmacotherapy represents a noteworthy outcome.

The Ayurvedic diagnosis of Madhumeha, particularly of the Vataja variety in an older patient with Kapha-Vata prakriti, Mandagni, and Krura Koshta, directed the therapeutic approach toward restoring Agni, correcting Strotas vikruti, and reducing Ama. The multi-drug, multi-modal strategy is consistent with classical recommendations in Charaka Samhita.^[3,4]

Nisha Amlaki Churna (*Curcuma longa* + *Emblica officinalis*): This formulation has been extensively studied. Curcumin from Haridra (Turmeric) exhibits anti-hyperglycaemic activity through PPAR-gamma agonism, inhibition of alpha-glucosidase, and reduction of hepatic gluconeogenesis. *Emblica officinalis* (Amalaki) is rich in Vitamin C and tannins, with demonstrated insulin-sensitising and antioxidant effects. Their synergistic combination has been noted in several clinical studies to reduce fasting and PP blood glucose.^[8,9,10]

Chandraprabha Vati: A classical polyherbal compound containing Shilajatu, Guggulu, and 37 other ingredients known for their Meha-hara (anti-diabetic) properties. It acts on Mutravaha and Medovaha Srotases, improving renal handling of glucose and reducing adipose-related metabolic perturbation.^[11]

Tikta Kshira Basti: This Panchakarma procedure involves enema with medicated bitter-herb-infused milk. The administration of seven consecutive alternate-day sessions in August corresponded with the most marked fall in PP BSL (from 234.4 to 182.0 mg/dL between months 2 and 3). Tikta Kshira Basti is described in classical texts specifically for Vatavyadhi associated with Dhatu kshaya, which is the pathological substrate of Madhumeha. Its systemic immunomodulatory, anti-inflammatory, and dhatu-nourishing effects may underlie the glycaemic benefit.^[12]

Phalatrikadi Kashaya and Panchtikta Guggulu address Medovaha Srotas obstruction (a central pathogenic factor in T2DM/Prameha),^[13] while Arogyavardhini Vati used briefly for hepato-metabolic support aided early lipid and Agni regulation.^[14]

The significant BMI of 27.3 kg/m² (overweight), Mandagni, Kapha involvement, and dietary habits (oily, fried, night eating) align with the Ayurvedic concept of Santarpanjanya Prameha. Dietary correction alongside Samshodhana and Shamana was integral to outcomes.

6. CONCLUSION

This case report presents the successful Ayurvedic management of Type 2 Diabetes Mellitus / Madhumeha in a 55-year-old woman using a sequenced protocol of Shamana drugs and Panchakarma (Tikta Kshira Basti) over 8 months. A 41.8% reduction in fasting, 41.5% reduction in post-prandial blood glucose and HbA1c by 26.51%. was achieved without conventional pharmacotherapy, alongside full resolution of presenting symptoms and no adverse effects.

This case contributes to the evidence base for Ayurvedic interventions in T2DM. Well-designed randomised controlled trials with standardised Ayurvedic protocols are required to validate these findings and to elucidate the mechanistic pathways involved.

7. Patient Perspective

The patient reported marked improvement in quality of life, energy levels, and sleep quality by Month 4. She expressed satisfaction with the gradual, systematic approach and noted that symptomatic relief preceded measurable glycaemic improvement, which sustained her adherence to treatment. She reported no discomfort during the Basti procedures and tolerated all oral medications without gastric side effects.

8. Declarations

8.1 Informed Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying data. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

8.2 Ethics Approval

This case report documents standard clinical practice and did not involve any experimental intervention. Ethical approval was not required as per applicable institutional policy; however, patient confidentiality has been fully maintained.

8.3 Competing Interests

The authors declare no competing interests.

8.4 Funding

No funding was received for this work.

8.5 Authors' Contributions

Clinical assessment, treatment, and follow-up were conducted at the authors' Ayurvedic clinic, Sangvi, Pune. Case documentation and manuscript preparation were done by the treating clinician.

9. REFERENCES

1. Magliano DJ, Boyko EJ; IDF Diabetes Atlas 10th edition scientific committee. IDF DIABETES ATLAS. 10th ed. Brussels: International Diabetes Federation; 2021.

2. Pradeepa R, Mohan V. Epidemiology of type 2 diabetes in India. *Indian J Ophthalmol.*, 2021 Nov; 69(11): 2932-2938. doi: 10.4103/ijo.IJO_1627_21. PMID: 34708726; PMCID: PMC8725109.
3. Acharya JT, editor. *Charaka Samhita of Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta*. Reprint ed. Varanasi: Chaukhambha Orientalia; 2022. Nidana Sthana, Chapter 4 (Prameha Nidana).
4. Acharya JT, editor. *Charaka Samhita of Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta*. Reprint ed. Varanasi: Chaukhambha Orientalia; 2022. Chikitsa Sthana, Chapter 6 (Prameha Chikitsa).
5. Acharya JT, editor. *Charaka Samhita of Agnivesha with Ayurveda Dipika Commentary of Chakrapanidatta*. Reprint ed. Varanasi: Chaukhambha Orientalia; 2022. Sutra Sthana, Chapter 17 (discussion of Santarpanotha disorders and the pathogenesis relevant to Prameha).
6. Salehi B, Ata A, V Anil Kumar N, Sharopov F, Ramírez-Alarcón K, Ruiz-Ortega A, Abdulmajid Ayatollahi S, Tsouh Fokou PV, Kobarfard F, Amiruddin Zakaria Z, Iriti M, Taheri Y, Martorell M, Sureda A, Setzer WN, Durazzo A, Lucarini M, Santini A, Capasso R, Ostrander EA; Atta-ur-Rahman; Choudhary MI, Cho WC, Sharifi-Rad J. Antidiabetic Potential of Medicinal Plants and Their Active Components. *Biomolecules.*, 2019 Sep 30; 9(10): 551. doi: 10.3390/biom9100551. PMID: 31575072; PMCID: PMC6843349.
7. American Diabetes Association Professional Practice Committee for Diabetes*. 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes-2026. *Diabetes Care.*, 2026 Jan 1; 49(1): 27-S49. doi: 10.2337/dc26-S002. PMID: 41358893; PMCID: PMC12690183.
8. Munshi R, Karande-Patil S, Kumbhar D, Deshmukh A, Hingorani L. A randomized, controlled, comparative, proof-of-concept study to evaluate the efficacy and safety of Nisha-Amalaki capsules in prediabetic patients for preventing progression to diabetes. *J Ayurveda Integr Med.*, 2023 Nov-Dec; 14(6): 100806. doi: 10.1016/j.jaim.2023.100806. Epub 2023 Oct 17. PMID: 37857033; PMCID: PMC10587713.
9. Bedarkar P. *Review of Nisha Amalaki—An Ayurvedic formulation of Turmeric and Indian Goose Berry in Diabetes*. *World Journal of Pharmaceutical and Medical Research.*, 2017; 3(9): 101–105.

10. Rao G, Bhat S, Rao GS, Bhat GP. *Antidiabetic and antioxidant efficacy of a powdered mixture of Curcuma longa and Emblica officinalis in diabetic rats in comparison with glyburide*. Webmed Central Diabetes., 2013; 4(2): WMC004065.
11. Sp, ahalya & tm, vijayakumar & rc, satish. (2025). Efficacy of chandraprabha vati with glimepiride in newly diagnosed type 2 diabetes patients: a randomized clinical trial. Asian journal of pharmaceutical and clinical research, 164-168. 10.22159/ajpcr.2025v18i5.54162.
12. Effectiveness of Ayurvedic Basti Chikitsa in the Management of Prameha Poorvaroopavastha with special reference to Prediabetes. Int J Ayu Pharm Res [Internet]. 2026 Jun. 7 [cited 2026 Jun. 20]; 14(6): 186-95. Available from: <https://ijapr.in/index.php/ijapr/article/view/4122>
13. Clinical efficacy of phaltrikadi kwath in controlling blood sugar level in prameha (type 2 diabetes mellitus). Ayushdhara [internet]. 2015 dec. 8 [cited2026jun.20]; 2(2). Available from: <https://ayushdhara.in/index.php/ayushdhara/article/view/46>
14. Mane, P. N., DG, D., Ugale, P. P., Shekhar, A., Varghese, J., Bathe, A., & Lagad, A. The Study of add on effect of Madhusudan Vati and Arogyavardhini Vati in Prameha with special reference to Type 2 Diabetes Mellitus. International Journal of Ayurvedic Medicine, 2023; 14(2): 362–368. <https://doi.org/10.47552/ijam.v14i2.3302>